

## **Chapter 3 [Networking Concepts] begins now.**

**Network:** Network is a system in which many devices or machines connect together to communicate in a meaningful way. The meaningful way is achieved in networks by implementing some predefined rules called Protocols.

Network is a generic term that is used in many contexts but here we are learning Computer Networks.

Three important concepts of network are connectivity, communication and protocols. Connectivity says that machines must be connected by physical links. Communication refers to the state of transmission of data in between the machines. Protocols are predefined rules that govern all this activity.

### **Advantages of networking:**

- 1. Data Sharing:** In a networked environment, data kept on one machine can be shared to other machines. Even this transmission can be fast enough. It is the primary advantage of networks.
- 2. Resource Sharing:** In a networked environment, devices like printers connected to one machine can be used by other machines.
- 3. Cellular Telephony:** Mobile communication has become possible all due to networks. Though cellular telephony is not a part of computer networks, instead it falls under telecommunication networks.
- 4. Satellite Broadcast System:** Live broadcast and television channels are other very important advantages of networks. This even involves satellite communication.

### **Disadvantages of networking:**

- 1. Security risk to data and resources:** Data moving in a network is always susceptible to different risks like hacking, virus infection and other hazards.
- 2. Network build-up cost is heavy:** The overall cost of building a network is significantly high. The devices, cables and other apparatus used for installation of networks are quite costly.

- 3. Complex operation:** The operation, maintenance and engineering of a network is quite complex. A user must be trained enough to deal with a network.

### **Assignments:**

- 1.** What is a network? List out its advantages and disadvantages.
- 2.** Differentiate between Data Sharing and Resource Sharing.